

We claim:

1. A tubular stent comprising first and second ends and being deformable between compressed and expanded configurations, the compressed configuration having a generally constant diameter and a pattern density adjacent the first end that is greater than a pattern density adjacent the second end, the expanded configuration having a transverse dimension at the first end that is larger than a transverse dimension at the second end and having a pattern density adjacent the first end that is substantially equal to a pattern density adjacent the second end.

2. A stent system comprising the stent of claim 1 mounted, in the compressed configuration, about a balloon inflatably disposed at a distal end of a delivery catheter, the balloon having an inflatable shape adapted to generally match the expanded configuration of the stent.

3. The stent system of claim 2 wherein the first end of the stent is a distal end.

4. The stent of claim 1 wherein the transverse dimensions are diameters.

5. The stent of claim 1 wherein, when in the expanded configuration, the first end is flared to a generally oval transverse section and the second end is generally circular in transverse section such that the stent is adapted for implantation proximally abutting a carina of a vessel bifurcation.

6. A stent system comprising the stent of claim 5 and at least one tubular stent element distally abutting the first end of the stent.

7. A stent system comprising the stent of claim 5 mounted, in the compressed configuration, about a balloon inflatably disposed at a distal end of a delivery catheter, the balloon having an inflated shape that is flared to generally match the expanded configuration of the stent.

8. The stent system of claim 7, the inflated shape of the balloon further having an inverted conical distal end.

9. The stent of claim 1 further comprising a series of cylindrical hoop elements, each hoop element having a serpentine filament forming a number of proximally and distally facing crowns disposed about the circumference of the hoop element, each hoop element being axially coupled to an adjacent hoop element through one or more adjoining crowns.

10. The stent of claim 9 wherein at least one hoop element adjacent the first end has a greater number of crowns than the hoop elements proximal thereto.

11. A method of implanting a stent comprising:

providing a tubular stent having a length, distal and proximal ends and being mounted, in a compressed configuration, about a balloon inflatably disposed at a distal end of a delivery catheter, the compressed configuration having a generally constant diameter and a pattern density that declines over the length of the stent;

using the delivery catheter to transport the stent to a flared location in a vessel of a patient; and

inflating the balloon to deform the stent into an expanded configuration imbedded in the vessel, the expanded configuration having a flared shape and a pattern density that is generally uniform over the length of the stent.

12. The method of claim 11 wherein the balloon inflates to a flared shape generally conforming with the expanded configuration of the stent.

13. The method of claim 11 wherein the flared shape of the expanded stent configuration is wider at the distal end than at the proximal end.

14. The method of claim 11 wherein the flared location in the vessel is a portion of a bifurcation proximally adjacent a carina.

15. The method of claim 14 wherein the balloon has a concave distal end to permit placement of the stent proximally abutting the carina.